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SOCIAL ELEMENTS IN THE THEORY OF VALUE.

Of recent years it has become increasingly common to substitute for the old term "political economy" the more correct name "economics" or, better still, "social economics." But, although from the very beginning the science was supposed to include the relations of private wealth to public welfare, the full import of the term "social economics" has scarcely been recognized. This is specially true of that part of the subject which deals with the fundamental laws of value. Although the social point of view is implicit in the writings of almost all the great thinkers on the subject, it has been explicitly stated by only a very few, and even then with a failure to realize the important corollaries of the statement. The general standpoint in the discussion of value has been individualistic, and it is this individualistic conception which is largely responsible for the divergencies of opinion that are still to be found.

A good example of this misunderstanding is the controversy which is still raging as to the very foundation of

value. On the one hand, we are told — and the statement has been repeated by a brilliant writer at the last meeting of the American Economic Association — that the cost of production theory of value has been relegated to the limbo of antiquities, and has been supplanted by the doctrine of marginal utility. On the other hand, we have the equally positive statement by another recent writer that the marginal utility theory, which at one time seemed to possess the minds of the younger American economists, has now been quietly shelved in favor of the older classical doctrine of cost. From the individualistic point of view it is difficult to reconcile these statements, and it can strike no one with surprise that the attempts at reconciliation have thus far not been signally successful. Yet it is susceptible of proof that both assertions are true, and that each statement of the law may be merged into a higher synthesis. What this article will attempt to show is not so much that the value with which economics deals is essentially social, but that the corollaries of this statement, hitherto much neglected, serve to illumine some dark corners of economic theory.

I.

It is not necessary in this place to point out that the elements that enter into value are, on the one hand, the urgency of our desire for a commodity and, on the other, the quantity at our disposal. When we speak of the value of an article in the economic sense, we think not of its usefulness in general, but of the utility of a definite quantity; and we think not of the total utility of this quantity taken by itself, but of its marginal utility as compared with that of other commodities. Value deals not with total utility, but with marginal utility; and value may be defined as the expression of marginal utility or the result of our estimate of marginal utility.

Value as a universal conception is as true of the individual living apart from society as of social beings. The estimate put by the individual on one commodity as compared with another is the foundation of all value. Robinson Crusoe, on a desert isle, would assign a value to apples as compared with nuts, the value of each being in agreement with their marginal utility to him. As a matter of fact, however, we live in society, not on a desert island. Social economics deals with the relation of man to man, of class to class. The value with which we have to deal, therefore, is not an individual, but a social matter. It is society as a whole which sets a value on things. Society is indeed composed of individuals, but it is the aggregate of individual wants that shapes value in actual life. The want of the individual influences value only as it influences this aggregate of wants. If a rich maniac, for instance, escaping from the asylum, should take it into his head to offer a thousand dollars for a common spoon for which every other person would give only five cents, his subjective estimate would have no appreciable influence on the value of the spoon; and, if he actually paid the thousand dollars, society would be justified in locking him up and in punishing the seller.*

Value in society depends upon the fact not only that each individual measures the relative urgency of his own different wants, but that he compares them, consciously or unconsciously, with those of his neighbors. I not only measure the relative satisfaction that I can get from apples or nuts, but the quantity of apples I can get for the nuts depends upon the relative estimate put upon

*When the supply of an article is limited and the desire of the individual is such that the article possesses a peculiar utility for him, not shared by the rest of the community, the subjective estimate may influence value. But this is true only for the reason that, because of the limitation of supply, the subjective estimate of the single individual forms so large a part of the collective desire. To get my ancestor's watch out of the pawn-shop, I may pay, if necessary, a great deal more than its real value; *i.e.*, than its real social utility. But the border line between an enthusiastic collector and one with a "screw loose" is sometimes a thin one.

them by the rest of society. Some individuals may prize a commodity a little more, some a little less; but its real value is the average estimate, the estimate of what society thinks it is worth. If an apple is worth twice as much as a nut, it is only because the community, after comparing and averaging individual preferences, finds that the desire unsatisfied by the lack of an apple is twice as keen as that unsatisfied by the lack of a nut. Value, therefore, is not merely the expression of marginal utility: it is the expression of social marginal utility.

The principle that value is the expression of social marginal utility serves to explain how a thing that has no direct utility to the individual may yet have a value for him. If by chance I get possession of a locomotive, it is utterly useless to me; but, if I can dispose of it to a railroad company, it acquires a value, because in other hands it will serve a social purpose. The locomotive now has an indirect utility for me, because through it I can secure things of direct utility. Its indirect individual marginal utility to me is the result of its direct marginal utility to the community as a whole; that is, to that part of the community where marginal comparisons are made between locomotives and other goods. Of all the valuable articles in existence, only an infinitesimal fraction possesses any direct utility for any one man; yet, the more of them any one has, the richer he is, provided he can dispose of them to others. Thus, while social utility is made up of a combination of individual utilities,— that is, while a thing cannot be useful to society unless it is useful to the individuals that compose society,— the indirect marginal utility of anything to an individual is the result of its social marginal utility. To a member of society the indirect marginal utilities of a commodity form by all means the chief elements in its value to him. In most cases, in fact, the indirect utility is the only utility of any importance to individuals. Hence, for people liv-

ing in society, the marginal utility that controls value may be said to be the reflection of social marginal utility. In society our readiness to part with nuts or apples will depend not so much on the degree in which we as isolated individuals prize nuts as compared to apples, but chiefly upon the degree in which other people prize apples as compared to nuts. Their estimate is the controlling consideration with us. Value is hence the resultant of a socialization of wants.

The old puzzle of iron being more useful to mankind than diamonds, while diamonds are incontrovertibly the more valuable, is thus easily solved. There are, in fact, two solutions, one depending on the distinction between total utility and marginal utility, the other depending on the distinction between individual utility and social utility. As to the first, iron in the abstract is indeed more useful than diamonds; but a pound of iron does not satisfy as many, or as urgent, wants as a pound of diamonds, and it is therefore not so valuable, even to an isolated individual. When we say that iron is more useful than diamonds, we refer to iron in the abstract. When we say that iron is more valuable than diamonds, we refe to a definite quantity. It is therefore true that a commodity may possess more utility and at the same time less value than another; but the utility to which we then refer is not the marginal utility. The total utility of eight apples is greater than the total utility of five, but the marginal utility may be less. When the Dutch monopolists destroyed a portion of the colonial pepper crop to increase the price, the total utility of the supply fell; but its marginal utility, or its value, rose.

At the same time it may conceivably happen that to any one individual a pound of iron may not in and of itself be more useful than a pound of diamonds. Yet this fact will not control value. For the indirect utility of iron is far greater than its direct utility, in precisely the same way

that the wants of a community are more important than the wants of any individual. Even though a pound of iron may at a given moment be more directly useful to an individual, it is always true that a pound of iron does not satisfy as many, or as urgent, social wants as a pound of diamonds. When we speak of the value of iron or of diamonds, we refer to their social utility, not to their individual utility. Or to put it in another way, the marginal utility of iron or diamonds to a man living in society is a reflex of their social utility. Therefore, iron is always less valuable than diamonds, because the social marginal utility of a pound of iron is always less than the social marginal utility of a pound of diamonds. Value in society is always the expression of social marginal utility. Social economics deals only with this kind of value.

Since value is a social conception, depending on a comparison of divers commodities, and since this comparison of divers commodities can be made in society only by their transfer from individual to individual, it is clear that the value with which social economics has to deal is exchange value, or value in exchange. Speaking roughly, we may say that the value of an article is what it will exchange for. Speaking strictly, we mean that the value of an article may be expressed in terms of any other article for which it will exchange.

Earlier writers made a distinction between value in use and value in exchange; but they not only confused value in use with total or absolute utility, but also confused value in use with individual utility. As soon as we grasp the fact that the utility with which economics deals is marginal utility, and furthermore that it is social marginal utility, the distinction between value in use and value in exchange disappears.* The study of Robinson Crusoe

*We sometimes meet the awkward phrase, "subjective and objective value." "Subjective" value refers to individual valuation: "objective" value refers to the social valuation. The terms are awkward because they obscure the fact that at bottom value is not an external characteristic of a

is important in showing us that the foundation of value is independent of exchange as between man and man, and that it is to be found in the desire on the part of the individual to satisfy his wants. Crusoe weighs off one want against another, and thus gets an estimate for value. But, as soon as we leave Crusoe and deal with men in society, we find that not only does the individual as before measure one want against another, but that the satisfaction of that want depends upon the estimate put by other individuals on their respective wants. In other words, value in society — that is, in actual life — is value in exchange; and this value in exchange is nothing but the expression of its true value in use to society as a whole,— that is, of its social marginal utility.*

It is accordingly plain that, when we define the value of a thing as the expression of its social marginal utility, we mean that value is an expression of its exchange power. For exchange power is based on the comparative estimate of direct social utility, which gives to every owner of the commodity the indirect individual utility that lies at the root of value. As we can estimate this exchange power only by comparing one commodity with another, value is sometimes, but less accurately, spoken of as a ratio, or a ratio of exchange. Value is, indeed, relative, but it is not a relation or a ratio: it is an expression of our estimate of the relative exchange power of a commodity.

thing, but an expression of its relation to an individual. Value is the result of an estimate of a quality, not the quality itself. In this sense there is no objective value. It can be called objective only in the sense that, when society attaches a value to a thing, it is something to which the individual or subjective valuation must conform in making an exchange.

*It is not strictly accurate to say that the original idea of value is independent of exchange. It is independent of exchange as between man and man; but it is not independent of exchange as between commodity and commodity, between want and want. Crusoe exchanges in his mind apples and nuts in estimating their value to him. The value in use is thus really only one kind of value in exchange, although it is a peculiar kind of exchange. Value in individual economy always presupposes two things. Value in society presupposes in addition at least two men. Pantaleoni, *Pure Economics*, p. 127, realizes this in a certain way; but even he sees only a part of the truth.

II.

Value, as we have seen, has a meaning only when attached to a definite quantity of an article. The value of iron means nothing: the value of a ton of iron means something. In order to ascertain why anything has value, we must therefore inquire not only why we attach any importance to it as compared with other things in general, but also why a definite quantity of that article satisfies more or less of our wants than an equal quantity of something else. We must regard not only our desire in the abstract, but our desire for a particular amount. That is, in analyzing value we must take into consideration not only the demand, but the supply; for the effective demand for an article which lies at the root of value is itself influenced by the supply. Of two equally useful articles we shall be more concerned in securing the one the supply of which is limited than the one the supply of which is abundant. That is the very meaning of marginal utility.

What regulates supply? In last resort it is the forces of nature as utilized by the energy of man. In some cases, nature gives so abundantly that man need do nothing. In other cases, nature is so niggardly that his utmost effort fails to augment the scanty stock. Between these two extremes lie the great mass of commodities, the supply of which can be increased through human action. The more readily Nature discloses her secrets to man, the less is the difficulty of securing a supply. The greater the stubbornness of Nature, the more determined do our efforts become. It is in this sense that value may be considered to be the measure of the difficulty of attainment; that is, of the cost involved in securing a supply.

What, more precisely, is cost? The word is used in a variety of senses. To the consumer, cost means price. If a thing costs a dollar, he means that the price is a dol-

lar. To the employer, cost means total cash outlay expended in production. Here the cost may be less than the price, the difference between cost and price being his profits. A machine may cost the builder ten dollars; he may sell it for twelve. To the workman, cost means irksomeness of labor; the harder the work, the greater the cost, the more does his labor "cost" him. Underlying all these meanings is the idea of sacrifice, the giving up of something in return for the object to be attained. All sacrifice involves a pain,—a pain of doing or of refraining from doing,—that is, a pain of doing something distasteful or of refraining from doing something pleasurable.* The one is present physical sacrifice, the other present mental sacrifice, depending upon a future physical sacrifice.

Just as the word "utility" brings to our mind the pleasure we get from a thing, so the term "disutility" is used to signify its ability to inflict pain. We know that the marginal utility of a commodity diminishes with the increase of the amount at our disposal, and under certain conditions shrinks to zero. We have so much of it that it becomes indifferent to us. It possesses what Jevons calls "inutility"; *i.e.*, no (marginal) utility. Its value, as in the ordinary case of air and water, is nothing. Under other conditions of supply a commodity which usually possesses utility may actually inflict a pain.† Wood ordinarily satisfies a want; but, when the prospective farmer tries to make a clearing, the wood is something to be got rid of. Its presence is a discomfort. It possesses not a positive, but a negative, utility. It has gone through the stages of utility and inutility, and has reached that of disutility. Instead of being a commodity, it might now be called a "discommodity." So, in just the opposite way,

* That people often make sacrifices gladly does not invalidate the truth of this statement. If the sacrifice were not painful, no merit would attach to it.

† Some commodities which seem to give us pain really afford a surplus of pleasure. A distasteful medicine is none the less prized by us.

water in parts of England is something to be got rid of by draining the fens; water in arid America is so necessary for irrigation purposes that it attains a high value.

Not only things external to man run through this scale from utility to disutility. Physical activity itself is subject to the same law. When a man begins to work, the exercise of his muscles is a pleasure. A certain amount of it is even a necessity. With the increase in the amount beyond a certain point, the pleasure diminishes, until further activity becomes a matter of indifference. A still further increase means discomfort, until, finally, any more work involves positive agony. Labor, or toil, therefore, means painful exertion. But just as the same commodity may, according to circumstances, possess utility or disutility, so the same activity may or may not involve toil. Singing is generally a pleasure; to the chorus girl it is toil. Golf playing is a diversion; to the golf teacher it is labor.

Cost, therefore, is at bottom equivalent to pain. We undergo pain in order to secure utility or to remove disutility. Cost is always the antithesis of remuneration. We give up something in order to get something in return. The ordinary man tries to secure the greatest result with the least effort. He will toil only up to that point when the cost, or pain, begins to exceed the pleasure of what he gets in return. There are grades in disutility or pain, just as there are grades in utility or pleasure. As the marginal utility of a commodity depends on the supply, so the marginal disutility or pain of labor depends on the amount. The more fish I have, the less the utility of each fish; the more hours I must work to catch them, the greater the disutility of each hour's work. Up to a certain point the pain of the work does not equal or exceed the pleasure I get from the fish. Beyond that point I shall not work, because the result will be a surplus of pain. At that marginal point the utility of the fish

equals the pain or cost of the labor. If with the same sacrifice I can catch ducks, a duck will be worth as much to me as a fish. There will be a balance between the pleasure and the pain; or, in other words, the pleasure and pain will be in equilibrium. In the case of the individual economy,—*i.e.*, of man living apart from society,—the marginal degrees of utility and of pain, or cost, are therefore equal. Marginal cost equals marginal utility. The value of the fish may be estimated in either the one or the other.

In dealing with the problems of actual life, however, we treat not of a Crusoe living on ducks and fish, but of men living in society and making exchanges with each other. The individual economy is profoundly modified by the social economy. Our study is social economics. This is the point that has often been overlooked.

We have seen that the marginal utility to an individual is, in effect, a reflex of the social marginal utility. In the same way, individual "disutility" is really a result of social disutility. What gives one man pleasure may give another pain. I may enjoy a horse; but, if you do not ride or drive, the horse will put you to the useless expense of keeping him. Yet, since there is a social demand for horses, you can get rid of him to advantage; and you will therefore not give him away, but keep him until you can sell him with profit. Although the horse had no direct utility for you, he now has an indirect utility because of his social utility. So if the farmer, mentioned above, who wanted to make a clearing, lived by chance near a large community, he would not burn the wood, but sell it, because it would now have a social utility. Its disutility to him would be converted into a utility. It is only when anything produces a surplus of pain to the community as a whole — as a plague of grasshoppers, or an inundation, or the sewage of a city which is not intelligently disposed of — that it possesses social disutility. In such a case it can have no indirect utility for the individual.

Since cost is a form of disutility, it follows that the real cost of importance in affecting value is social cost, not individual cost. We stated above that value is the measure of sacrifice. In what sense is value the measure of sacrifice? Evidently, not of individual sacrifice. The street-sweeper may work harder than the opera singer, and yet the value of his services will be less. Value is a social conception: society puts its appraisal upon commodities. If value is a measure of sacrifice, and if value is a social estimate, value must be the measure of social sacrifice or cost. Social sacrifice means the sacrifice which members of society as a whole are willing to make. The exertion of one man is estimated in relation to the exertion of another, and the sacrifice of each is compared with the needs of society as a whole. The standard is social, not individual. It is far easier to be a street-sweeper than an opera singer. Society is more willing to spare the former than the latter; for, to replace the one, society must give up more of its energy than to replace the other. Consequently, although the street-sweeper may work the harder the sacrifice or cost to society is less than in the case of the opera singer. The opera singer saves society more effort. When one commodity is exchanged for another, or when both cost the same, it means that the additional sacrifice imposed upon society to replace either of them is the same. The marginal social cost is identical.

Since economic activity consists in securing as much enjoyment as possible with the least effort, or cost, it follows that under conditions of progress the individual will secure a surplus utility. If game is plentiful in one section and so scarce in another that the hunter must work to the point of exhaustion, his needs will be satisfied by far less exertion in the first case than in the second. The extra utility which he enjoys is called residual utility or surplus utility or, in short, surplus. Looked at from the point of view of production, it is a producer's surplus:

the labor of hunting is the cost of securing or producing the game. From the point of view of consumption it is a consumer's surplus: the pleasure of eating the game is its utility. The excess of the utility over the cost is the surplus. Whether we call it consumer's surplus or producer's surplus is immaterial.

The conception of surplus, however, is sometimes used in a second way. In the case of the surplus just referred to we compare enjoyment with exertions, and we call it either producer's or consumer's surplus, according as we look at it from the point of view of enjoyment or of cost. This conception of surplus is thus universal: it applies to every man who is at once a producer and a consumer, to the man living in society as well as to the solitary huntsman. But the term "surplus" may be used in another sense, which abstracts from the idea of exertion altogether, and which regards every man only as a consumer. It assumes that there has been no cost of acquiring the articles, or that the subjective cost or toil of acquisition is precisely the same to all. Here the surplus satisfaction that an individual secures is entirely a consumer's surplus,* depending on the relative urgency of his different wants. If I agree to give up a book for my neighbor's knife, I do so because I expect his knife to afford me more satisfaction than my book. The utility to me of the knife is greater than the pain of parting with the book. Regarded simply as a consumer, I consider the pain of parting with the book as the exact equivalent of the utility I lose; but since the utility to be afforded to me by the knife is greater than the utility I lose through the book, there will be a balance to my credit. As a consumer, I expect a surplus enjoyment.

* The term "consumer's rent," first suggested by Marshall, is not so good because of the equivocal meaning of "rent." "Consumer's profit" would be better, because there is no equivocation attaching to that word. But the simplest and best term is that used by Marshall in the later editions of his *Principles*,— "consumer's surplus."

This specifically consumer's surplus, however, is of no practical significance. For in actual life we cannot enjoy anything without procuring it; that is, we cannot abstract from the cost of acquisition, or consider that the cost is precisely the same to all. Just as enjoyments or utilities differ from individual to individual, so do costs or sacrifices differ. Both the knives and the books can be obtained only on the condition of some exertion. The cost, or pain, of parting with the book depends on the cost, or pain, of acquiring the book. Hence the only real surplus which is of importance is the surplus of enjoyment over cost, whether we call it producer's surplus or consumer's surplus. If we take the possession of knives and books for granted, we can indeed speak of consumer's surplus; but, if we reflect that knives and books must be procured before they can be parted with, the surplus becomes a real surplus, which can equally well be called a producer's surplus. It is a surplus of utility over cost.

Individual surplus, however, is essentially subjective, and never affects prices. For value is a social conception. This statement is true of surplus in general as well as of the theoretical consumer's surplus just referred to. I secure a surplus utility from my comrade's knife, but he secures a surplus utility from my book. He would otherwise not have given up the knife. The exchange is therefore mutually beneficial. The old belief that what one man (or one country) gains in an exchange another loses is incorrect. Each gets a surplus utility. But the value of the book and the knife remain the same. The marginal utility of one book would still be equal to that of one knife. If for some reason the book-owners found that knives were twice as useful to them as before, and if for a similar reason the knife-owners thought that books were twice as useful to them as before, the surplus utility of the exchange to each owner would be double what it was

before; but the book would still exchange for the knife: their value would be unaltered. Value may thus remain the same, even when the benefits of exchange to both parties grow. The more varied the wants of a community, the greater the benefits of exchange. The international level of prices may be the same, and yet each country that is a party to international trade will normally benefit. On the other hand, values may change, and the surplus utility remain the same. If the book-owners prized knives twice as much as before, while the importance of books to knife-owners was unchanged, this very fact would increase the aggregate social demand for knives, and therefore the sacrifice that the book-owners must make to get a knife. The knife-owners would make the book-owners give two books for a knife. The price of books would fall, and that of knives rise. The marginal utility of one knife would equal the marginal utility of two books. The surplus utility to the book-owners would remain the same, because, although the utility would increase, the cost would increase in the same proportion. In every exchange the cost, or sacrifice, depends on the reciprocal demand for the commodities. The surplus utility that any one individual gets from an economic action, therefore, has no influence on value, however much it may affect his own happiness. It is a result, not a cause. Surplus is the excess of total utility over total cost. Value is an expression of marginal utility or marginal cost. Surplus in the case of any one person is the result of an individual subjective estimate which differs from man to man: value is the result of a social estimate in which the individual preferences lose their significance.

We must, therefore, be careful to interpret correctly the statement above, that marginal utility equals marginal disutility, or cost. In an isolated economy, where there is only one person battling with nature, this is true of the individual; but in society, whatever the rate of exchange,

it is only the social utility and social cost of which the marginal degrees are equal. If a knife exchanges for a book, it is because the demand in the community as a whole is such that the sacrifice to society of parting with a book is equal to the pleasure of society in getting a knife; or, to put it more accurately, a knife will exchange for a book only because the sacrifice to society in making the knife, for which it receives in return the pleasure of books, is equal to the sacrifice of making the book, for which it receives in return the pleasure of knives. To any one individual the sacrifice may be less than the pleasure, but that is possible only because to some other individual the pleasure is less than the sacrifice. The marginal pleasure in the aggregate must equal the marginal pain in the aggregate. The balance or equilibrium is not between the pains and pleasures of the individual, but between the pains and pleasures of the sum of individuals. The real equilibrium is a social equilibrium; otherwise there will be no exchange.

This shows clearly that the real cost to any member of society which influences value is not the subjective cost to him. The sacrifice imposed upon society to secure anything is, as we have seen, the exertion needed to replace it. To replace an article, however, from the social point of view, is to produce it. For, although an individual may replace an article by purchasing it from the producer, society as a whole can replace an article only by producing it. The total mass of commodities consumed is always equal to the whole mass of commodities produced. Thus, when we speak of social cost, we really mean cost of production; and, when we say that value is influenced by cost, we mean that value is influenced by cost of production. What may be to the individual a subjective cost becomes, when translated into terms of society — that is, of value — an objective cost to him. We think no longer of the sacrifice imposed upon any one individual, but only of

the social sacrifice, or cost, embodied in the commodity. Or, rather, the sacrifice, or cost, to the individual is the result and reflex of the sacrifice to the community. Just as we saw above that the individual utility which affects value is the reflex of the social utility, so the individual cost which affects value is the reflex of the social cost.* If an individual desires to secure a commodity, he will normally give for it not what he chooses, but what society as a whole fixes as the proper figure. He may personally like a cow more than a horse, or be able to raise a particular horse for less than a particular cow; but that will not enable him to buy a horse for less than a cow. His own individual estimate is of importance only as affecting the aggregate social estimate. Every individual gauges his economic well-being from the point of view of surplus,—of getting as much satisfaction as possible above the cost; but the cost, or sacrifice, which he must make is fixed not by himself, but by society as a whole.

III.

The failure to realize that value is a social conception has led to much useless controversy. Thus Ricardo and his followers maintain that the value of a commodity is fixed by its cost of production; while Jevons and those that agree with him contend that value is fixed by its marginal utility. Both are right, but neither is right in the sense in which he understood the terms. Cost of production is the measure of value; but it is not, as Ricardo thought, individual cost. Marginal utility measures value; but it is not, as Jevons thought, individual utility. Both cost and utility measure value, because, as we have seen, marginal social cost is always equal to marginal social utility. In the way each framed the statement, both Ricardo and Jevons were correct in deny-

* See below, p. 339.

ing the other's statement, and yet erred in their own. Rightly interpreted, each was correct in his own statement, and yet erred in denying the truth of the other. Let us make this clear.

Utility, as we know, is the fundamental quality of everything used by man. But utility is not sufficient to give value. For anything to have value its supply must be limited. The utility which gives it value is the marginal utility. If the supply is unlimited, the marginal utility is zero. Positive marginal utility, therefore, depends upon limitation of supply. But, if the supply is limited, it will cost some sacrifice to secure it. Therefore, when we measure the marginal utility of a commodity, we measure the cost of securing it. Therefore, either may be declared the cause and measure of value, because value depends on the relation of each to the other. The discussion as to which is the *causa causans* is as futile as the question what produces the peculiar sound from a hammer's blow on a sheet of metal: without the metal there would be no sound, without the hammer there would likewise be no sound. Both the hammer and the metal are equally the cause of the sound. So in economic life we deal with the demand for a commodity as compared with its supply. When we speak of utility, we think of the person who wants it,— that is, of the demand. When we speak of cost, we think of the person who parts with it, — that is, of the supply. But they interact mutually; for the demand, although reflecting the utility, would change if the cost were different; and the supply, although conditioned by the cost, would change if the utility were altered. To affirm that either utility or cost exclusively fixes value is as foolish as to say that either demand or supply exclusively fixes value. Value is the expression of the relation between demand and supply. We cannot speak of marginal utility without implying cost: we cannot speak of cost without implying marginal utility.

But all this is true, as we have seen, only of social cost and of social utility. The utility of anything to an individual figures in the determination of value only to the extent (in most cases infinitesimal) that the individual choice goes to determine or change the choice of the community. If I have a potato field at home, that will not obviate the necessity of my paying the market price for potatoes. If I am directed by my physician to live on potatoes exclusively, that will not lead the dealer to charge more than the market price. The demand that tells is the aggregate social demand, depending on the social utility.

Conversely, the cost that influences value is not the cost of production of that particular commodity to the individual producer. It may take me two days to make with old tools a table which fully equipped carpenters can turn out in a few hours. I can get for my table no more than the carpenters for theirs. And the carpenters can get this price for their table, not because it has cost them so much work, but because they save the members of society as a whole the sacrifice, or cost, of making the table for themselves. If there were no carpenter, society would have to set to work, abandon some of the things it does now, and give up some of its time to make tables. Instead of each member of society devoting a part of his day to making a part of a table, society as a whole sets aside a certain class to make nothing but tables. But what society is willing to pay for the table is always the marginal cost to it, and this marginal cost is the final sacrifice which society is willing to incur for tables as compared with other things. What the carpenter can get for the table will adjust itself to this amount of social sacrifice, and thus the value of a commodity gets to be the equivalent of the (individual) cost of producing it. We may thus roughly say that individual labor * or cost of

* The term "labor" is here, of course, used in the general sense, as including all exertion, and not in the Marxian sense of manual labor.

production fixes value; but what it really does is not to fix value, but to express the value that is fixed by social forces as a whole. The value is due not to the labor of the individual who has made it, but to the social service which it is going to render; that is, to the social sacrifice which it is going to save. If it does not render that service, it will not possess that value, no matter how much individual labor has been spent on it.* And, on the other hand, if less individual labor be spent on it, it will have less value,— not because less individual labor has been spent, but because the marginal sacrifice of society is now less.

We see, then, that value may be defined either as the expression of marginal social utility or as the expression of the marginal social sacrifice incurred to secure utility. Value may be estimated in terms of either social utility or social cost, because the marginal degree of the one is equal to that of the other. Individual labor affects value only as it affects this social cost or social utility, which is the supreme test. If a new machine doubles the output of cotton cloth, the price of cotton will fall one-half only if the social demand for cotton doubles, and if the relative cost of other commodities remains the same. If the output of everything else, including the precious metals, were to double, the price of cotton would not change. The measure of value is not individual labor or individual cost of production, but social labor or social cost. It is not individual sacrifice or individual utility: it is social sacrifice or social utility.

* Professor Clark, *The Distribution of Wealth*, p. 397, is the only writer to state this point clearly. But even he does not lay sufficient emphasis on the essential difference between the social and the individual point of view.

IV.

Since all progress consists in getting more results with less efforts, the problem of social cost and social surplus becomes one of basic importance. All surplus or residual utility is the margin of satisfaction over sacrifice. It may therefore be augmented in two ways: the sacrifice may remain the same, while the satisfaction increases; or the satisfaction may remain the same, while the sacrifice decreases. In the one case we deal with problems of consumption, in the other with problems of production. In the one case we approach the subject from the point of view of utility, in the other from that of cost.

The social surplus may be enlarged by changes in consumption. The sacrifice incurred by the individuals that compose society may remain the same, and yet they may use so much intelligence in the rearrangement of their choices of satisfaction that they may procure a greater net result. It need not cost more effort to cook a good dinner than an unpalatable one, and yet the surplus of satisfaction over sacrifice is greater. When social choices are improved on a large scale, there will be a great increase in the social surplus.

While it is possible to have in this way a larger satisfaction with the same effort, it happens just as frequently, however, that we can procure the same satisfaction with a smaller effort. The emphasis is here laid not upon consumption, but upon production. Whatever diminishes the cost of production enlarges to that extent the surplus of society. If the dinner which originally cost one dollar can now be supplied for fifty cents, we shall have the remaining half-dollar to spend on something new. All civilization depends on the increase of our wants. In most cases, however, the appearance of a new want requires additional effort on the part of individuals for its satisfaction. If the additional sacrifice keeps pace with the

additional want, we are no better off than before,— there is no increase of the social surplus. But as soon as we can satisfy the old want with a smaller total effort, the surplus is increased because some of the efforts previously devoted to the satisfaction of the old want are now set free for the attainment of the new object. With the same output of energy we receive greater results. Diminution of social cost is the great creator of social surplus.

While, therefore, changes in consumption are of significance in themselves, they become of great importance chiefly as engendering changes in production. Whether we call the social surplus, however, a consumer's surplus or a producer's surplus is, as we know, immaterial. It is equally immaterial whether we say that the progress is due to lower cost or to greater utility. Social surplus is the result of man's struggle with nature. It is the margin between result and effort. The way to increase the surplus is to maximize the results and to minimize the efforts; that is, to increase utilities and to decrease costs.

The lowering of cost is, therefore, a chief factor in progress. The less a thing costs society, however, the less value it will have in the market, until finally, when we can procure a thing for nothing, it will have no value at all. Progress consists in reducing costs, so that we gradually approach gratuity. But, in reducing the value of certain things, we necessarily increase the value of other things. By diminishing the efforts required to satisfy one want, we liberate the efforts needed to satisfy a new want; it is only when we can satisfy this new want that the means of satisfaction acquires value. For the pioneer who with difficulty is able to clothe and feed himself a piano has no value. It is only as clothing and food take up less of his energy — that is, become of less value to him — that he will appreciate the new want, until finally in civilized society a piano is worth far more than a suit of clothes. Since

value, as we know, is simply an expression for marginal utility, we cannot affirm that value in general ever increases or decreases. As pianos are worth more, clothing is worth less. Even if by chance both pianos and clothes were to be worth more, it means that other things in which they are estimated, or to which they are compared, are worth less. We must choose between plain living and plain thinking. Plain living is compatible with high thinking, and high living is generally attended with plain thinking. But we cannot have both at once. On the other hand, although value, as we have just seen, may not increase, total wealth does. Whereas formerly there existed only clothes, we now have clothes and pianos. Wealth as a social conception is an aggregate of final utilities: it is estimated by adding to the final utility of one economic good the final utility of every other good. The more economic goods — *i.e.*, the more commodities and services — at the disposal of the community, the greater will be the total wealth. Total value, on the other hand, is not an aggregate; it is not the final utility of each item added to that of every other item. It is the final utility of the whole stock of economic goods as an entirety. As the goods increase in number, the final utility of each diminishes, because final utility, or value, is relative. But, although the value of each item of the larger stock is now reduced, it is impossible to say whether the value of the entire stock is more or less than before. If for every unit of increase in the stock there is the same unit of decrease in the marginal utility, then value, as a whole, will never increase, however much wealth may increase. Value, as a whole, may therefore remain the same from generation to generation; for, when we say that some values go up, we mean that other values go down. But wealth increases from generation to generation, because wealth is an aggregate, not a relation.

We see thus how misleading is the statement, so often

met with, that increasing wealth means decreasing value. It is, indeed, true that, as civilization advances, the same effort will give us more and more satisfaction. We can procure with the same outlay of energy more comforts and more luxuries than our forefathers could. But, while each previously existing commodity is worth less, new commodities, which had no value before, because they did not exist at all, are now brought into the range of our satisfactions, and start out with a certain value. Taken all together, the commodities, new and old, may be worth the same as before. The value of each old commodity decreases, but the new commodity now has a new value. The total value of all commodities may never change, since value is an expression of relative importances. Decreasing value of particular classes of goods enables us to get more goods or kinds of goods; but the more goods of smaller value may equal in total value the former fewer goods of greater value. Public wealth, or social prosperity, however, depends upon the amount of return from a given outlay or effort. If society gets more return from the same effort, its income will increase; and the surplus increase will again facilitate production. In other words, wealth consists of economic goods as a whole, and grows with the increase of commodities. The more commodities, the greater the income, the less the effort to attain a given result. But the increasing wealth which goes hand in hand with the decreasing value of some commodities does not mean that all value is diminishing. Decreasing value of some commodities facilitates the creation of other commodities. Only in this sense does decreasing value mean increasing wealth. But value in general does not necessarily increase or decrease. Wealth, as a whole, changes: value, as a whole, suffers little or no change.*

* It is sometimes carelessly said that values go up or down, but what is meant is that prices go up or down. When we measure the value of all other commodities in the terms of a single commodity, money, prices of all such other commodities may go up or down. But there cannot be a simultaneous change in the prices of money and commodities.

V.

From this survey it will be seen that the essential element in the theory of value is the social element. Most of the failures to reconcile the existing differences of opinion on the theory of value are due to inattention to this point. Critics of economics often state that there is a total disagreement on the fundamental conceptions of the science, and imply that therefore the subject does not merit serious consideration. Unfortunately, even profound economists, in dealing with the topic of value, are apt to minimize the work of their predecessors, and to exaggerate the points of divergence between the earlier and the later views. Almost every new writer starts out with the statement, or the assumption, that well-nigh everything that has been said before is more or less worthless, and, having in this way cleared the ground, proceeds to reconstruct the entire edifice. On the other hand, it must be confessed that not much good can come of the attempt to conceal differences of opinion, and to read into earlier writers principles which were worked out only by their successors. On the whole, we cannot too highly praise the attitude of those who, like Professor Marshall, seek to preserve the continuity of economic thought. Yet, on the particular point which forms the subject of this article, Professor Marshall has shed but little light. A careful attention to the writings both of the classical economists and of the Austrians shows that their differences on the theory of value arise very largely from their failure to recognize the specifically social element in the problem. Yet the social conception was implicit in the Ricardian economics, just as it is implicit in that of the Austrians. The attempt of this article has been to state explicitly what is implicit in the work of others.

Take, as an example, the classic doctrine of international trade. Ricardo advanced the theory of comparative cost

as the foundation of international exchange. Mill elaborated this by his Equation of International Demand, in which he emphasized the importance of reciprocal demand as contrasted with the Ricardian doctrine of comparative cost. Cairnes went a step further, not alone by pointing out that the theory of international value can be comprehended only by understanding comparative cost in the sense of comparative sacrifice, but by analyzing still more carefully the respective influence of reciprocal demand and reciprocal cost. Regarded from the newer point of view, the theory of international value, as Cairnes put it, is nothing but a statement of the very kernel of the modern doctrine of marginal utility. Yet even Cairnes thought that the theory of international value differed from that of value in general.* This was primarily due to the fact that, in dealing with international trade, Cairnes, like Mill, was led to disregard the influence of individual cost; while in their discussion of value in general, as typified in domestic trade, their attention was not so strongly called to the effect of social cost or social utility. On the other hand, just as the classic doctrine of comparative cost really includes the theory of marginal utility, so the attempt of the Austrians to subordinate the theory of cost in general to the theory of utility becomes entirely unnecessary when both doctrines are interpreted in their true social light. While cost and utility in general are by no means equivalent, marginal social cost and marginal social utility are real equivalents.

It will be recalled by the readers of this journal that a faint glimmering of the principle emphasized in this article is to be found in the work of Karl Marx. The very core of the Marxian theory is that the basis of value is to be found in the "socially necessary" labor. But, while Marx endeavors to explain in the opening chapter of *Das Kapital* what is meant by socially necessary labor,

* Cairnes, *Some Leading Principles of Political Economy*, p. 353.

his subsequent treatment of the subject is vitiated by the failure to observe the distinction between social and individual valuation. The Marxian theory of labor as the measure of value is an individualistic, not a social theory, no less individualistic than that of Adam Smith or Ricardo.

It is obvious, therefore, that, although it has become the fashion to use the term "social economics," we have not yet realized all the implications of the term. If economics is a social science, the value with which it deals must be recognized to be a social conception. The only individual utility of any importance is a reflex of the social utility, just as individual cost is a reflex of social cost. Individual surplus is based on the social surplus, and individual welfare depends on the social welfare. In the same way as private ethics is now generally conceded to be the historical outgrowth of social ethics, so is the economy of the individual living in society an outgrowth of the social economy. Individualism itself receives its full interpretation and development only in the light of civilization; that is, in the light of social effort and social progress. The social theory of value carried out to its final conclusions would show us that only through society can the individual achieve his highest aspirations.

EDWIN R. A. SELIGMAN.

COLUMBIA UNIVERSITY.